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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,316	03/09/2004	Thomas E. Ricciardelli	2601.106	4292

7590
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06/29/2007

EXAMINER

DANIELS, MATTHEW J

ART UNIT	PAPER NUMBER
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1732

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/797,316	Applicant(s) RICCIARDELLI ET AL.	
	Examiner Matthew J. Daniels	Art Unit 1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
 4a) Of the above claim(s) 10-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Claims 1-9 in the reply filed on 11 April 2007 is acknowledged.

Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

2. This application contains claims 10-22 drawn to an invention nonelected with traverse in the reply filed on 11 April 2007. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Rejections - 35 USC § 112

3. Rejections set forth previously under this section are withdrawn in view of the claim amendments.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-5** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ricciardelli (USPN 6306318) in view of Masui (USPN 5053179). **As to Claim 1**, Ricciardelli teaches a

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method of making a composite floor tile comprised of a substantially flat polymeric substrate having top and bottom surfaces (Figs. 3 and 4), comprising the steps of providing a two-platen injection molding machine with first and second aligned mold halves (Fig. 2), forming an open ended cavity in the first mold half with a predetermined substrate design shape and a second open ended cavity in the second mold half (Fig. 2, items 56 and 58), closing the mold halves for a predetermined time to form a mold cavity for molding the tile therewithin (7:13-15), injecting the molten polymeric substrate material into the enclosed cavity under a pressure sufficient to fill the first cavity (6:66-7:4), cooling the enclosed mold cavity to solidify the injected substrate material, wherein the substrate is molded (7:14-15).

Ricciardelli is silent to the following aspects of the instant invention:

- (a) A first fixed mold and second movable mold halves
- (b) the preform lamina and a second mold half having sidewalls for seating the preformed lamina therein, seating the preformed lamina, and bonding the molten substrate material to the bottom lamina surface, wherein the substrate is molded to the lamina.
- (c) Leaving portions of the sidewalls adjacent the open end of the second cavity devoid of the lamina and thereby exposed to injected substrate material.

However, these aspects would have been prima facie obvious over Ricciardelli or Masui for the following reasons:

- (a) The same relative movement is provided between the mold halves of Ricciardelli, and therefore the method is performed in substantially the same way regardless of which of Ricciardelli's mold halves moves. Alternatively, it would have been prima facie obvious to the

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ordinary artisan to fix one mold half in order to maintain a fixed connection between the extruder of Ricciardelli and the mold inlet.

(b) Masui teaches a preformed lamina (5:22-26, 7:38-43) inserted into a second mold half having sidewalls (Fig. 10, item 11) for seating the lamina therein, and injecting molten material which would bond to the bottom lamina surface (Fig. 10, item 4).

(c) Masui teaches leaving portions of the sidewalls adjacent the open end of the second cavity devoid of the lamina and thereby exposed to injected substrate material (Fig. 11, item 2, for example).

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Masui into that of Ricciardelli (a) because Ricciardelli suggests injection molding (7:16-22), and the method of Masui is interpreted to be an injection molding (6:23-26, 3:21-29), and (b) the method of Masui would provide desirable functional characteristics to the formed article, such as improved appearance and wear resistance (See Masui, the skin is a fabric, metal, or dyed material, 5:15-21).

As to Claim 2, Masui teaches that the skin material desirably has a thickness of 0.6 mm, which is 0.0236 inches (5:60). **As to Claims 3 and 4**, Ricciardelli teaches injection within the claimed temperature range (6:28), the claimed injection pressure (7:4, 50 to 300 bar is about 725 to 4000 psi), and clamping pressure (7:13). **As to Claim 5**, Ricciardelli teaches that closure time is predetermined to solidify the material, thus closure time is a result effective variable. See MPEP 2144.05 II and *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to optimize the closure time to solidify the material of Ricciardelli.

5. **Claims 6-9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ricciardelli (USPN 6306318) in view of Masui (USPN 5053179), and further in view of Poorten (USPN 4737096). Ricciardelli and Masui teach the subject matter of Claim 1 above under 35 USC 103(a). **As to Claim 6**, Ricciardelli is silent to the vacuum. However, application of vacuum to an insert to retain its position is conventional in the art of injection molding, and is taught by Poorten (Figs. 6 and 8, items 18 and 52). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Poorten into that of Ricciardelli in order to maintain the position of the insert in the injection molding cavity. **As to Claim 7**, Ricciardelli is silent to the claimed limitations, however, Poorten teaches that the vacuum pressure must be sufficient to position and hold and insert against a wall with sufficient force to resist removal during the molding cycle (6:30-49). Thus, Poorten teaches that vacuum pressure is a result effective variable in order to maintain the insert in position. See MPEP 2144.05 II and *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to optimize the underpressure to arrive at the claimed value. In view of Masui's teaching of a similar thickness (see the rejection of Claim 2 above), it is submitted that Masui would implicitly provide substantially the same lamina weight per unit area. Alternatively, Masui provides a similar thickness, and it would have been prima facie obvious to select other materials to provide improved appearance, wear resistance, or other qualities. **As to Claim 8**, Poorten teaches vacuum pressure applied at the edges (corners) and center portions of the top surface of the insert from the bottom of the second cavity (Fig. 8, items 18 and 52). **As to Claim 9**, in the combined

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method, it would have been obvious to place Masui's skin or lamina onto the second mold and to selectively apply the underpressure (vacuum) of Poorten in order to maintain the insert in a fixed position during the molding cycle. It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Poorten into that of Ricciardelli in order to maintain the position of the insert in the injection molding cavity.

Response to Arguments

6. Applicant's arguments filed 11 April 2007 have been fully considered but they are not persuasive or are moot in view of the new grounds of rejection set forth above. The arguments appear to be on the following grounds:

- a) The claims now call for leaving portions of the sidewalls devoid of lamina. The desirable results of the invention are achieved by seating the lamina preform in the second cavity while leaving portions of the cavity sidewalls adjacent the open end devoid of the lamina.
- b) Ricciardelli does not disclose a "composite" floor tile.
- c) Visconti requires two preforms, but because the substrate is a "rigid material" it does not provide a teaching of the claimed invention. Claim 1 also requires a flexible lamina insert.
- d) Poorten is used for injection molding process for audio discs, but has no similarity (and is therefore non-analogous).

7. These arguments are not persuasive for the following reasons:

- a) Masui provides the sidewalls which are devoid of lamina, and this argument is moot in view of the new rejection above.

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b) Ricciardelli provides at least inorganic fibers (fiberglass or inorganic fibers) in the material, and therefore does provide a composite. A composite having a lamina on the surface is provided by Masui.

c) In the method of Masui, the material has substantially the claimed thickness, and thus the flexibility would be implicit.

d) The method of Poorten is asserted to be within the same field of endeavor of injection molding, and pertinent to the particular problem of maintaining the position of a part in a mold during an injection molding process. Only the intended use of the product appears to be asserted to be distinguishable from Poorten's method. Movement of inserts in the mold during the molding cycle is clearly undesirable because it would produce nonuniform parts. Poorten's vacuum system resolves this problem.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Daniels whose telephone number is (571) 272-2450.

The examiner can normally be reached on Monday - Friday, 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJD 6/23/07

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6/23/07